

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Robert A. Sanderson, et al.  
Serial No. : 09/696,139  
Filed : October 25, 2000  
Title : PISTON ENGINE ASSEMBLY

Art Unit : 3747  
Examiner : Kamen  
Confirmation No.: 2871  
Notice of Allowance Date: July 31, 2003

**Attention: Official Draftsman**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL OF FORMAL DRAWINGS

In response to the Notice of Allowance mailed July 31, 2003, please substitute the enclosed 31 sheets of formal drawings for the corresponding drawings presently in the application.

Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: October 30, 2003

  
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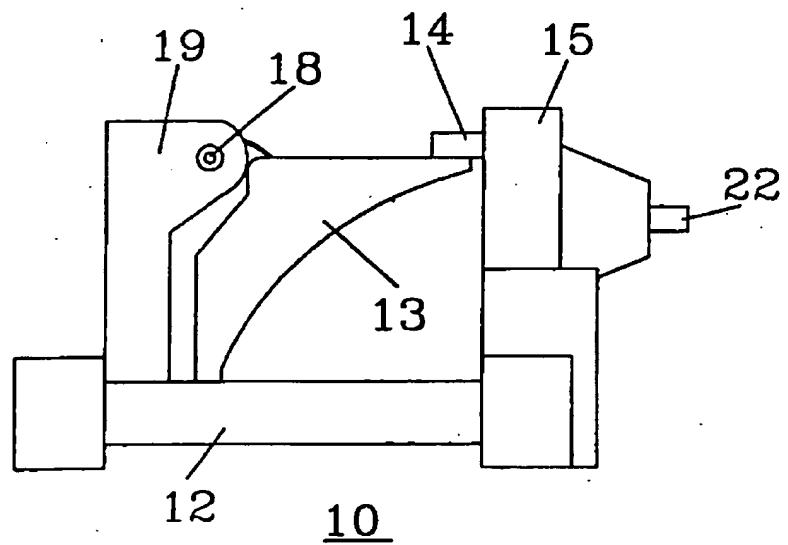


FIG. 1

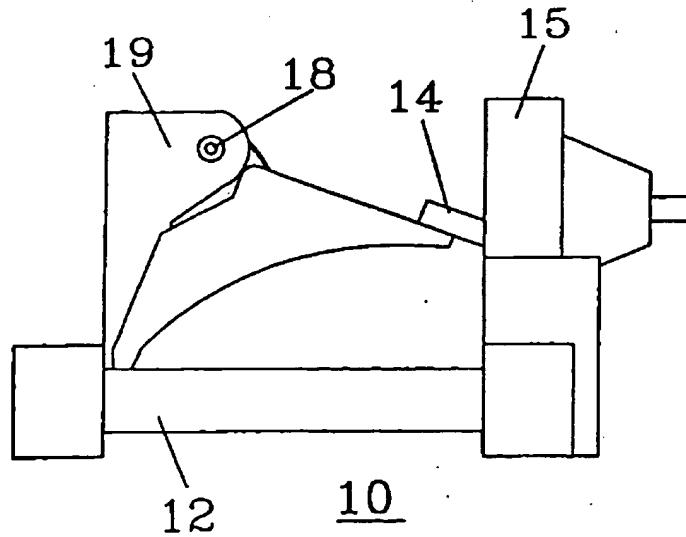


FIG. 2

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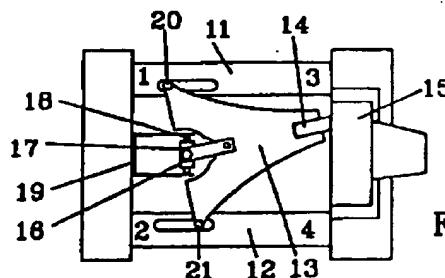


FIG. 3



FIG. 3a

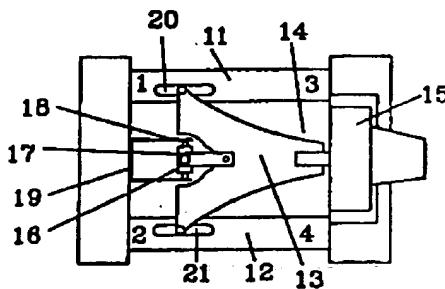


FIG. 4



FIG. 4a

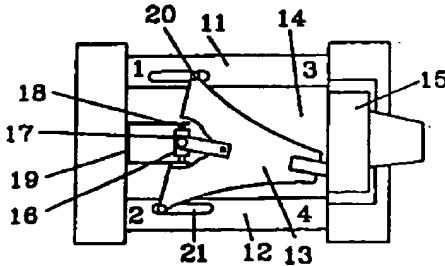


FIG. 5

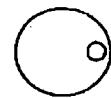


FIG. 5a

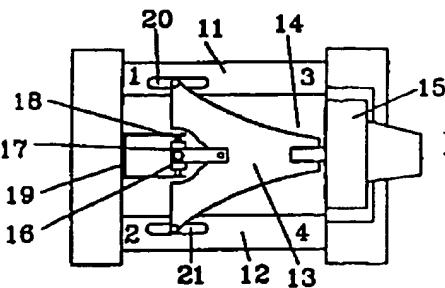


FIG. 6

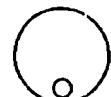


FIG. 6a

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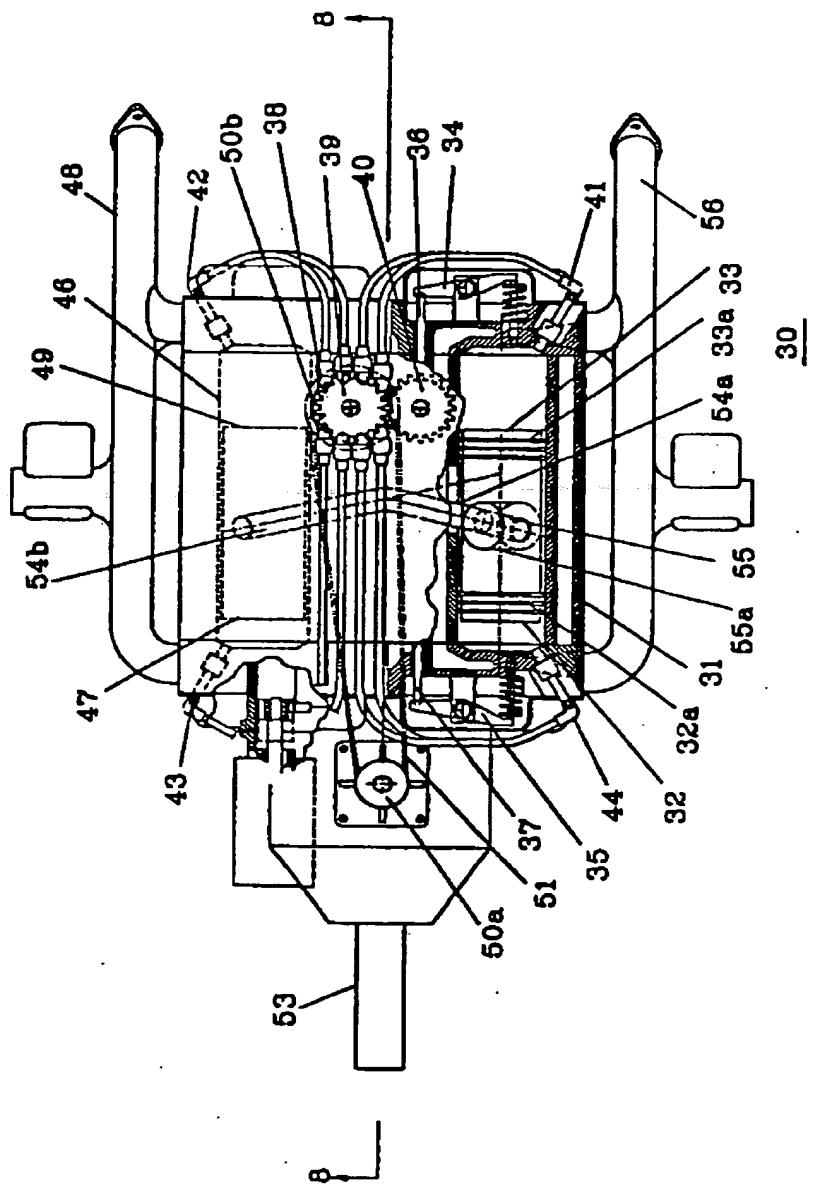


FIG. 7

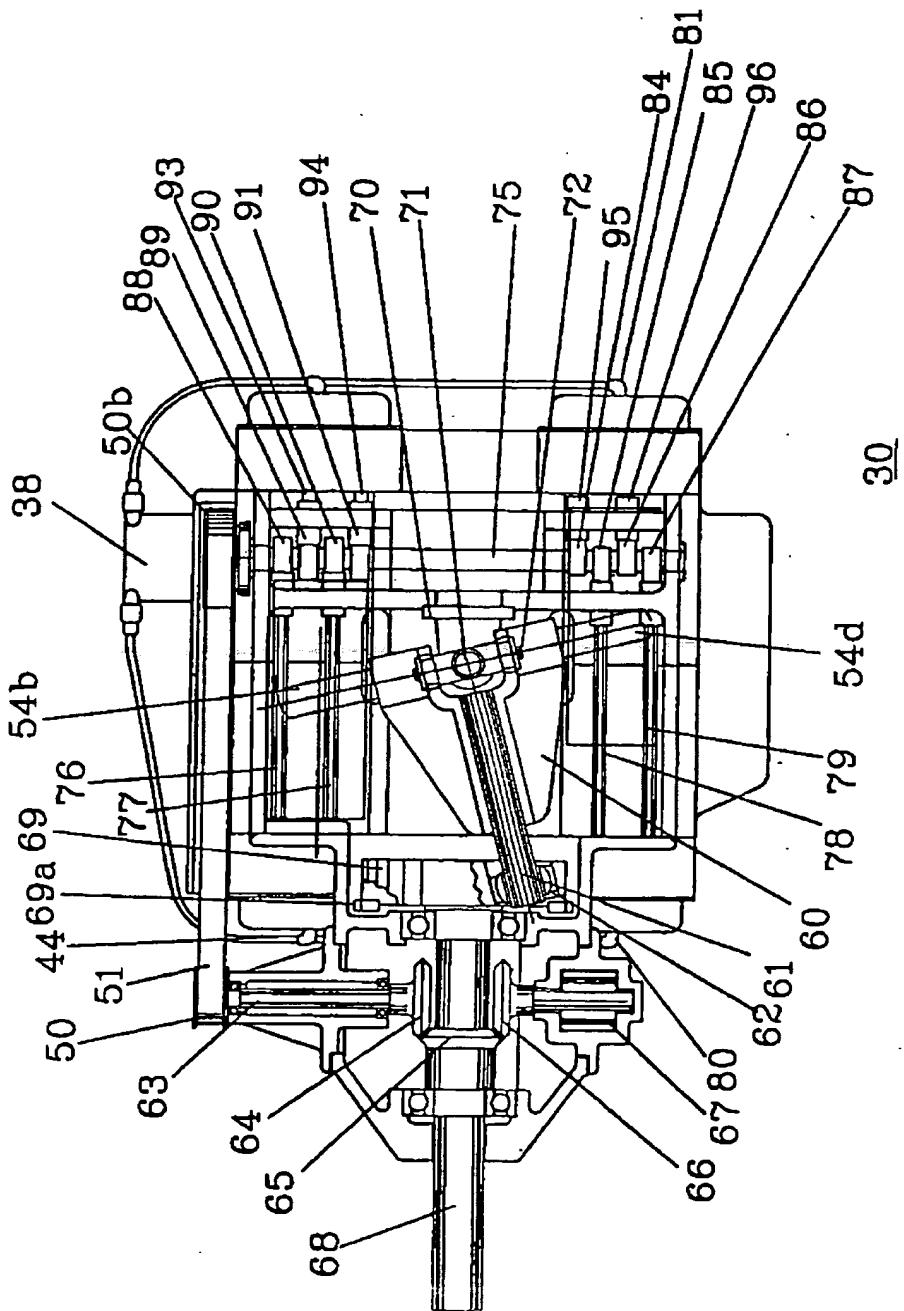
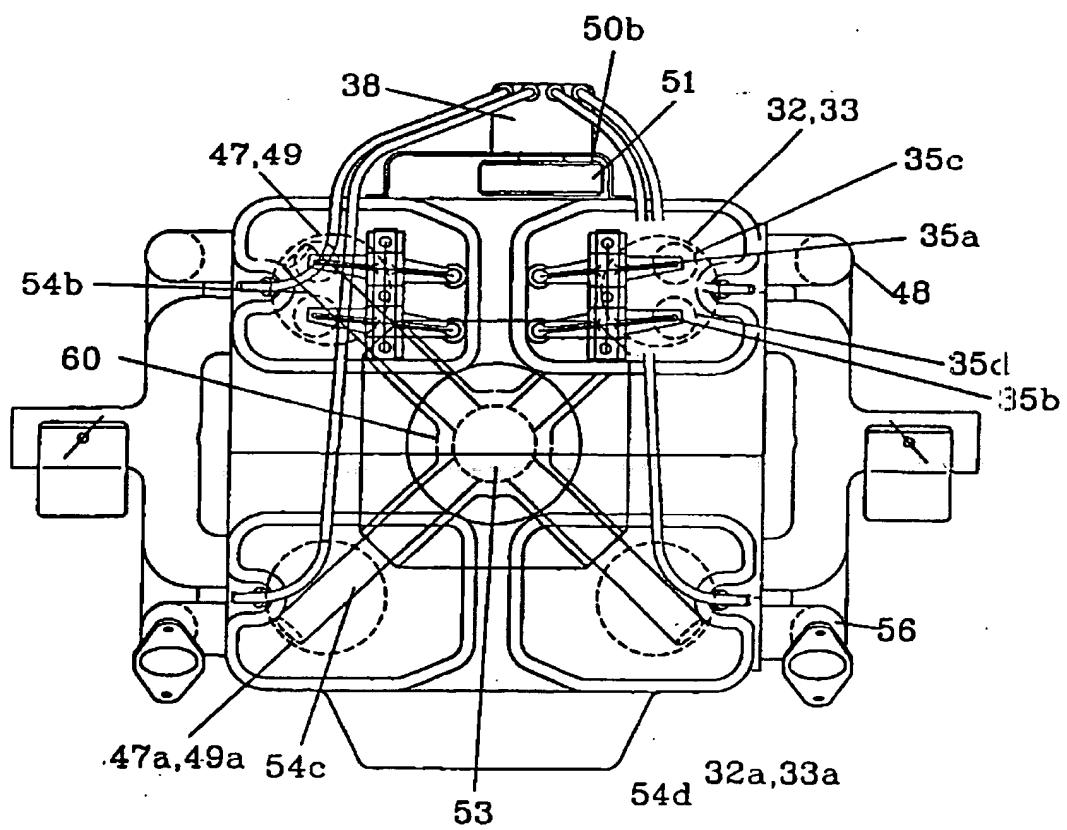


FIG. 8

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FIG. 9

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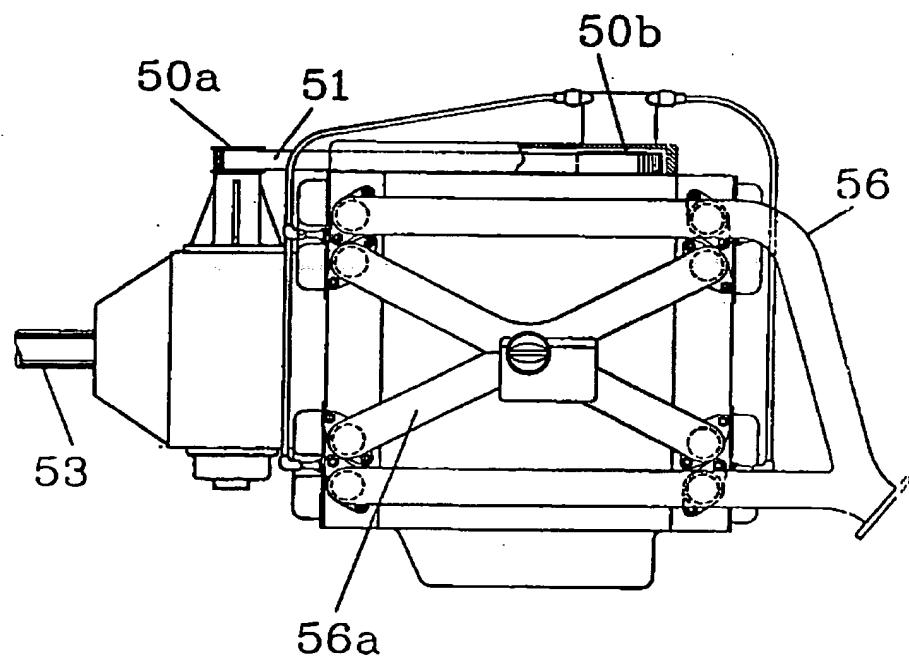


FIG. 10

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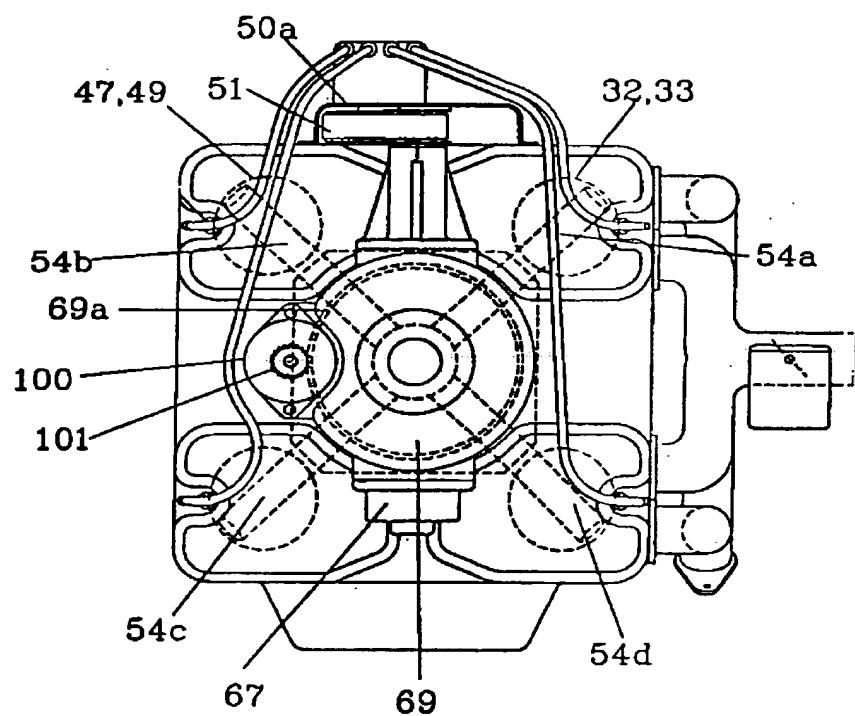


FIG. 11

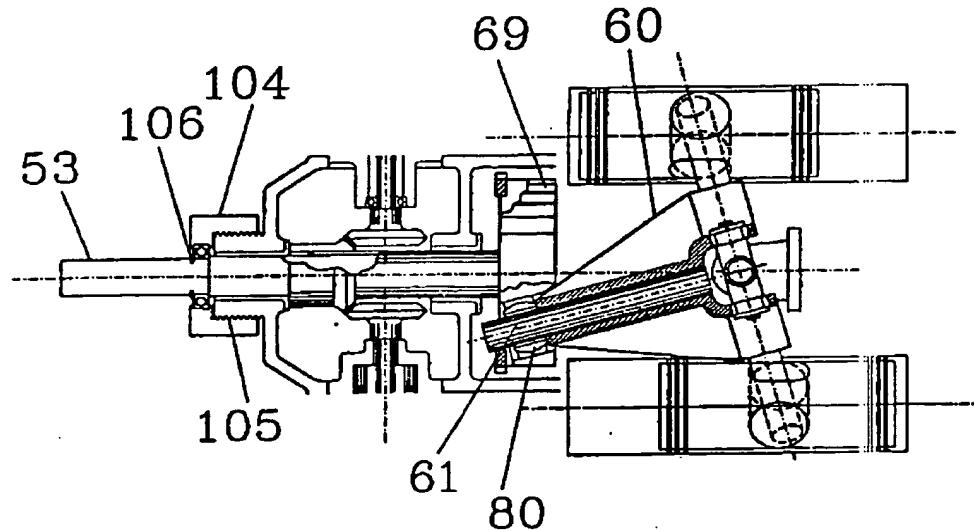


FIG. 12

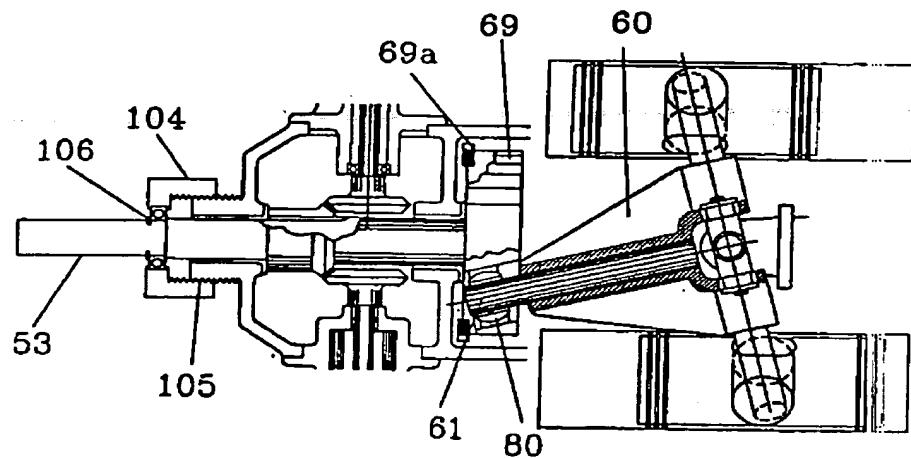
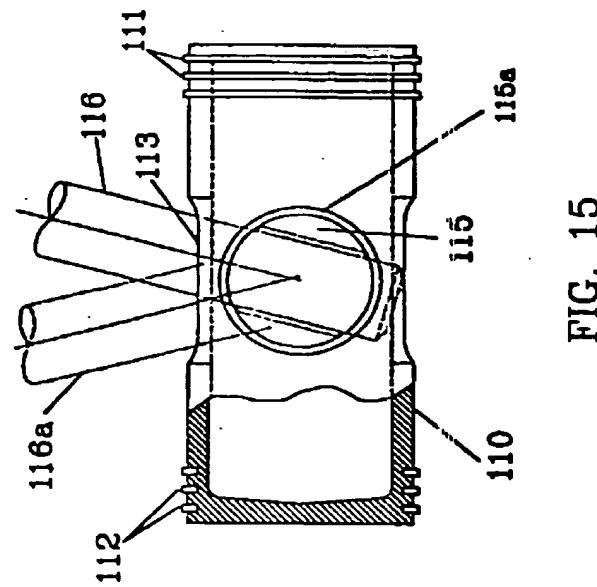
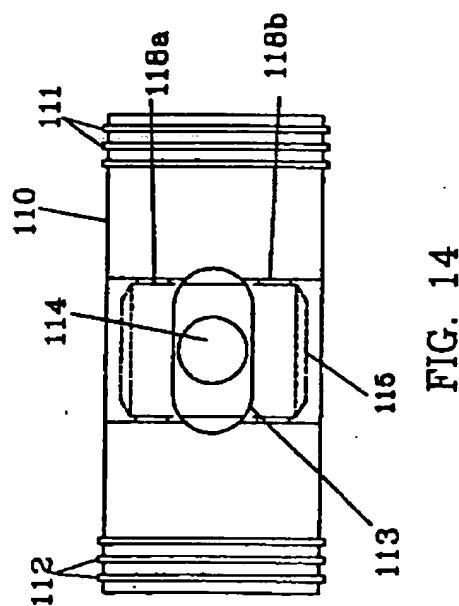
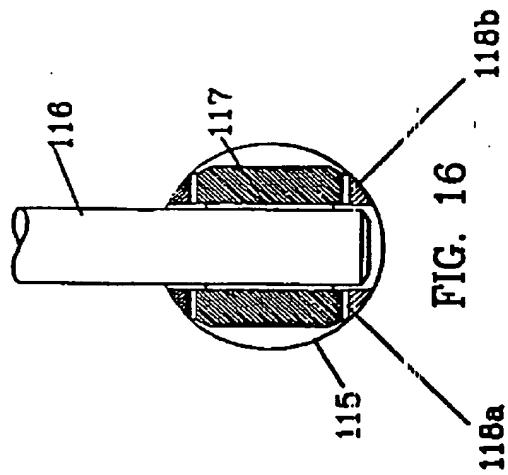


FIG. 13

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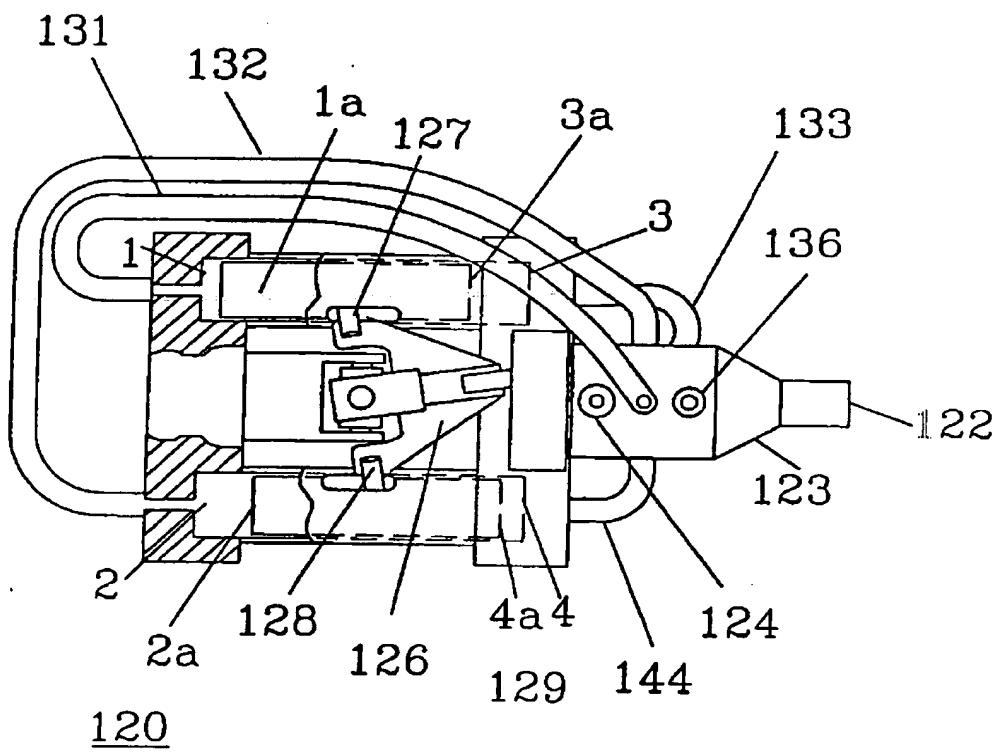


FIG. 17

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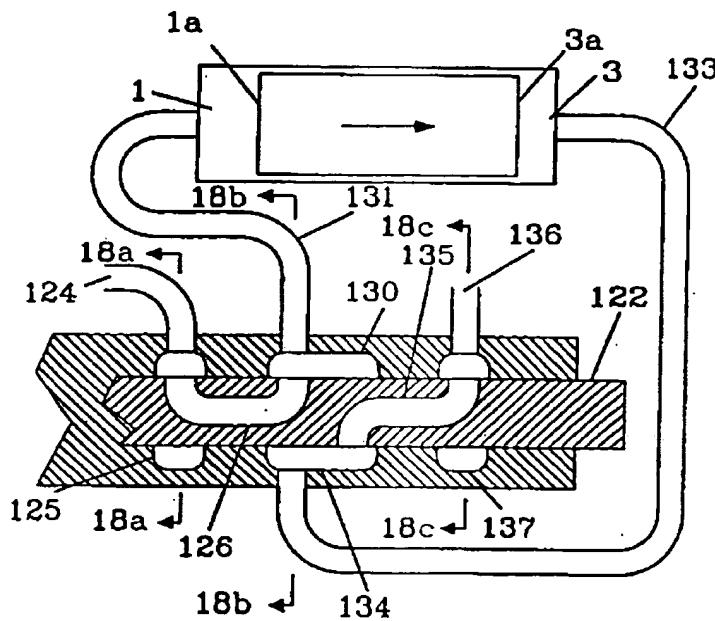


FIG. 18

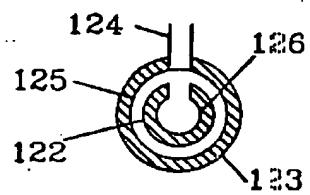


FIG. 18a

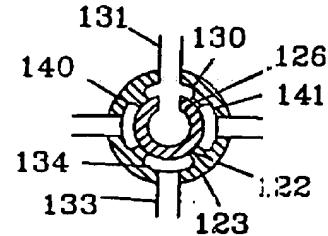


FIG. 18b

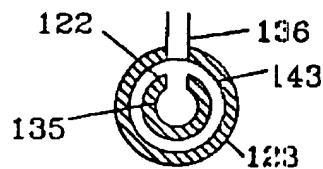


FIG. 18c

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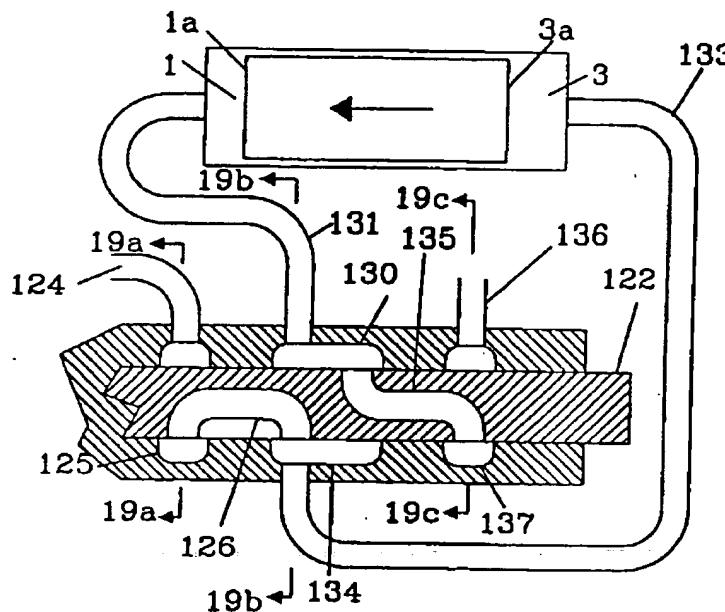


FIG. 19

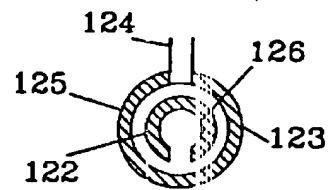


FIG. 19a

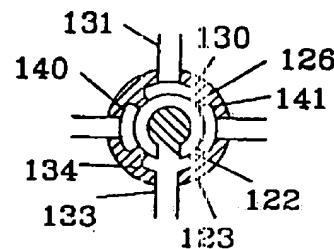


FIG. 19b

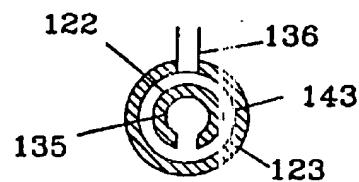


FIG. 19c

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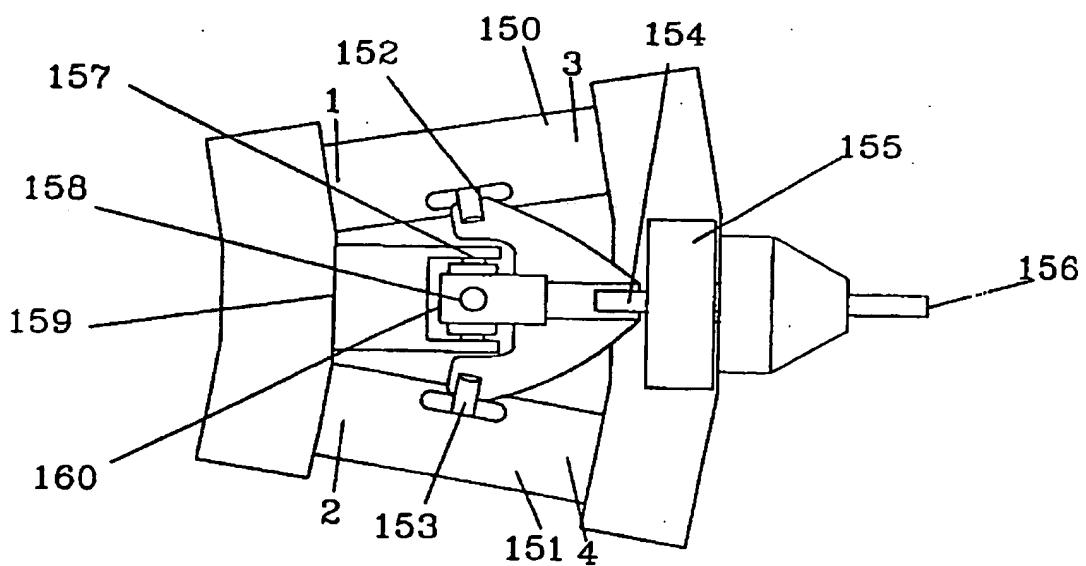


FIG. 20

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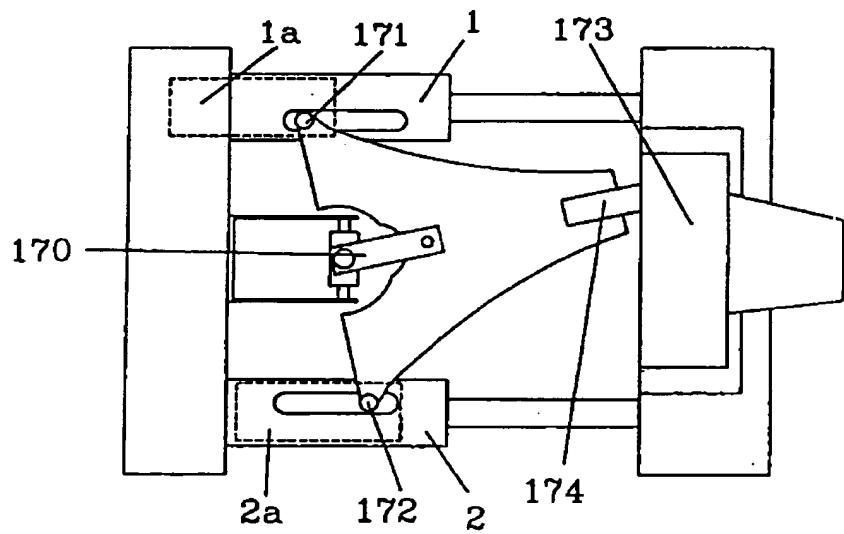


FIG. 21

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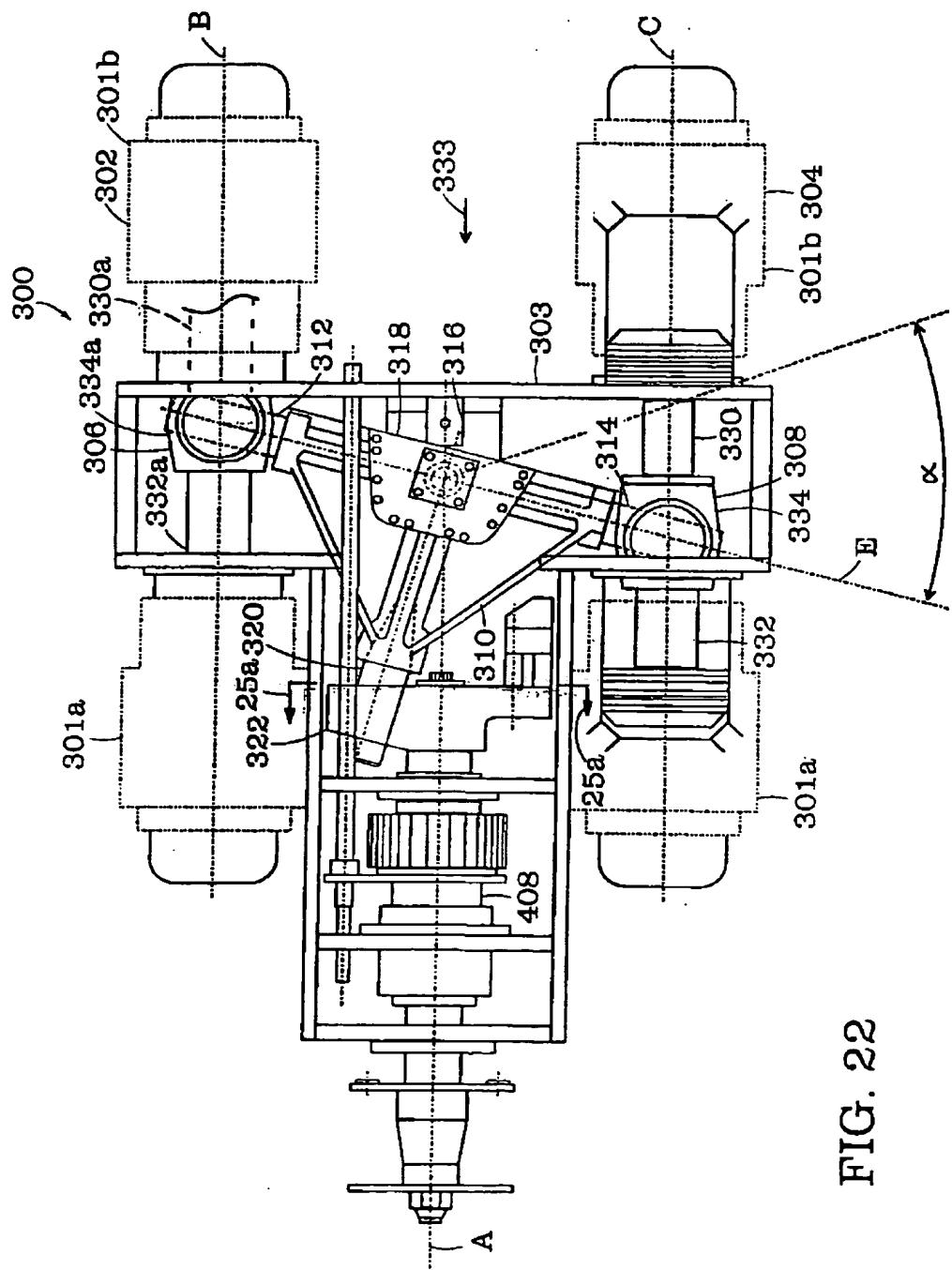
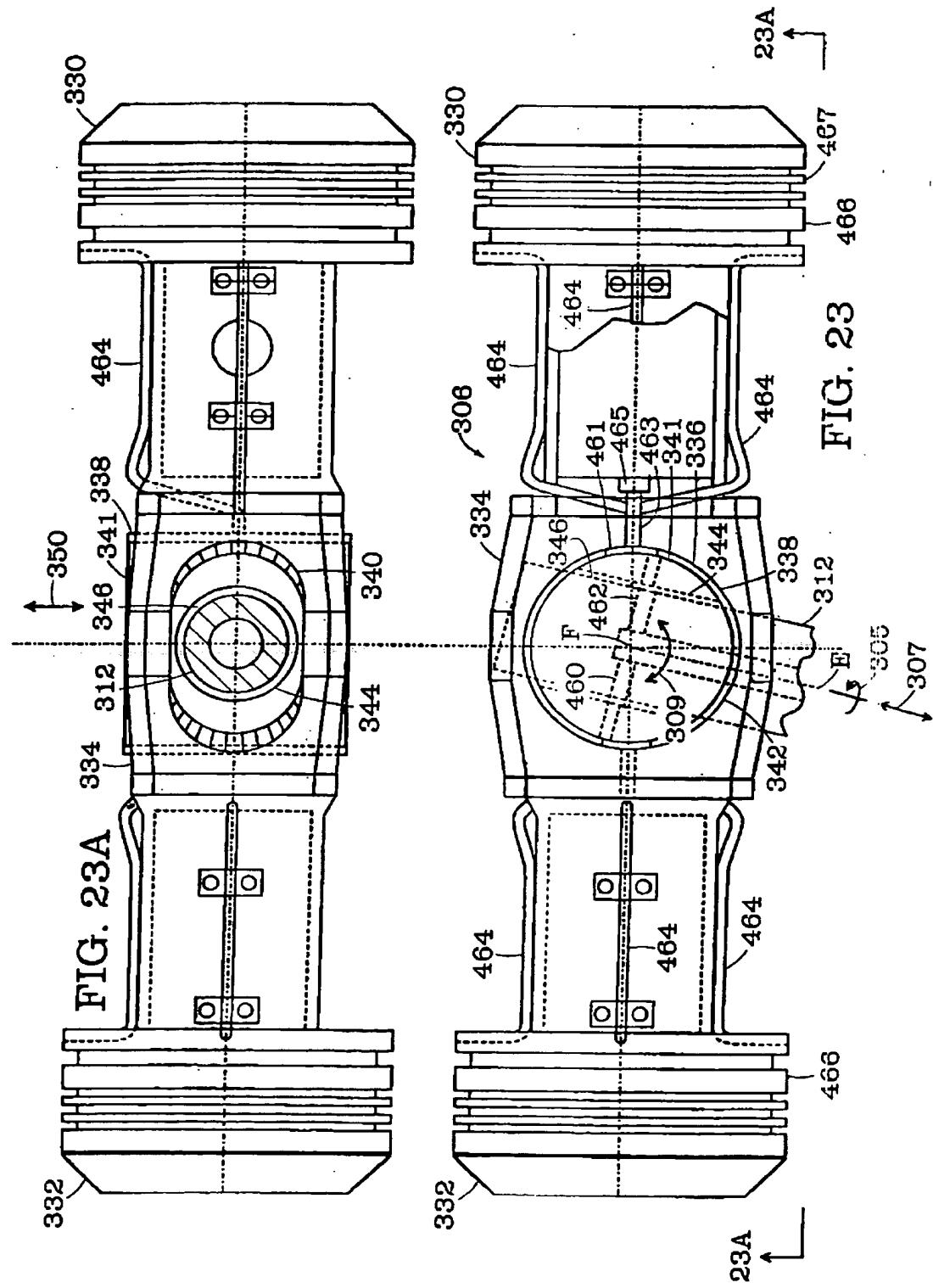
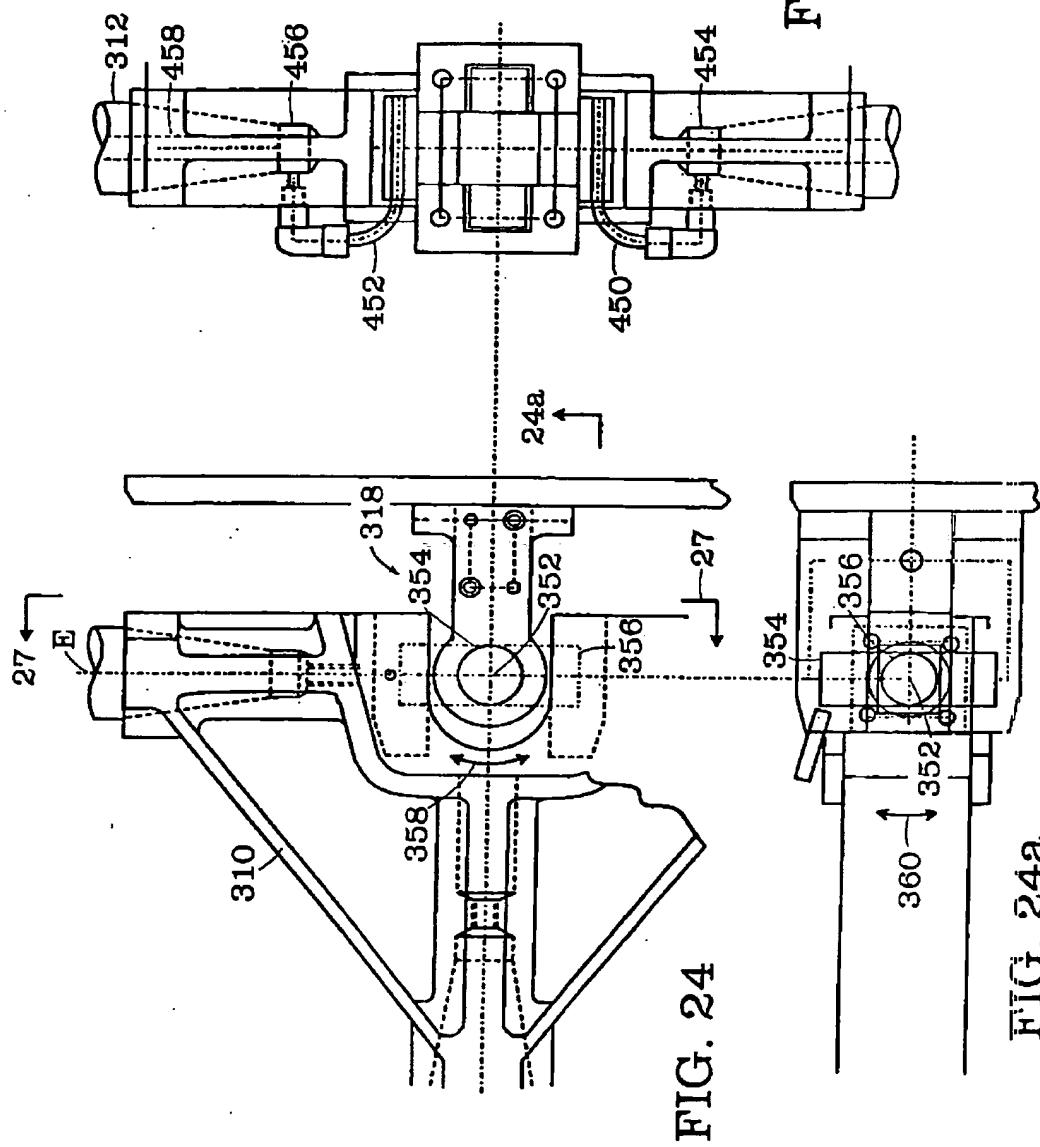


FIG. 22

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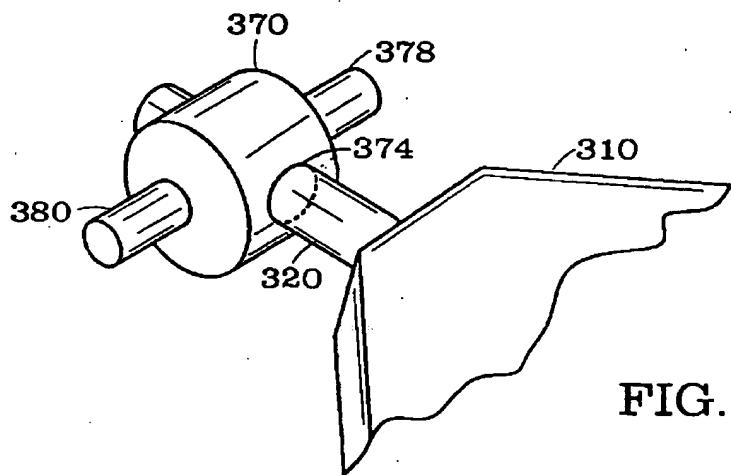
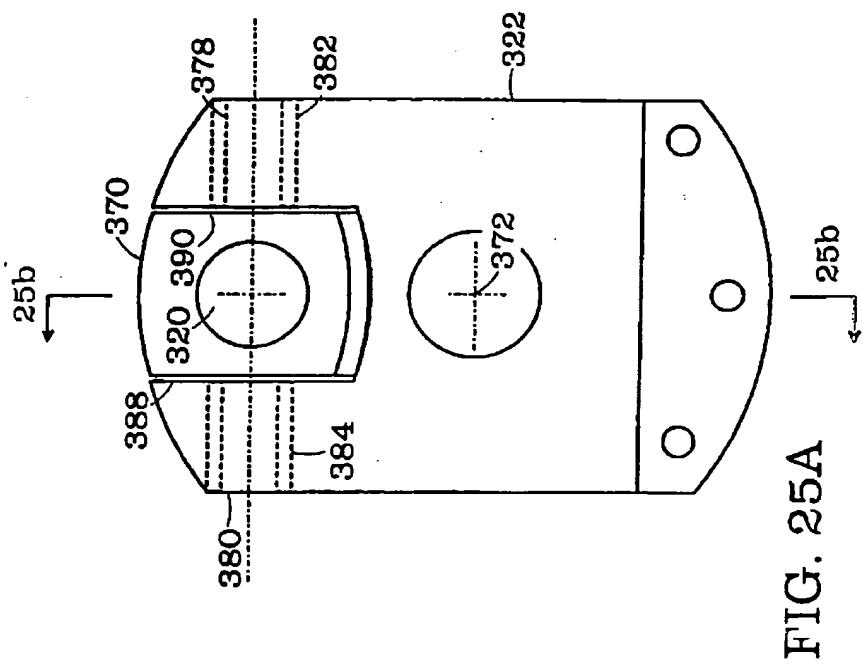
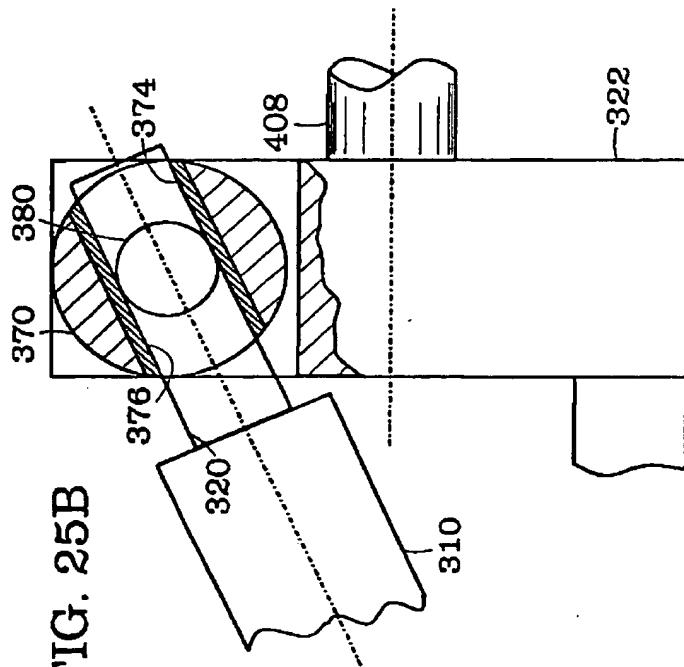


FIG. 25

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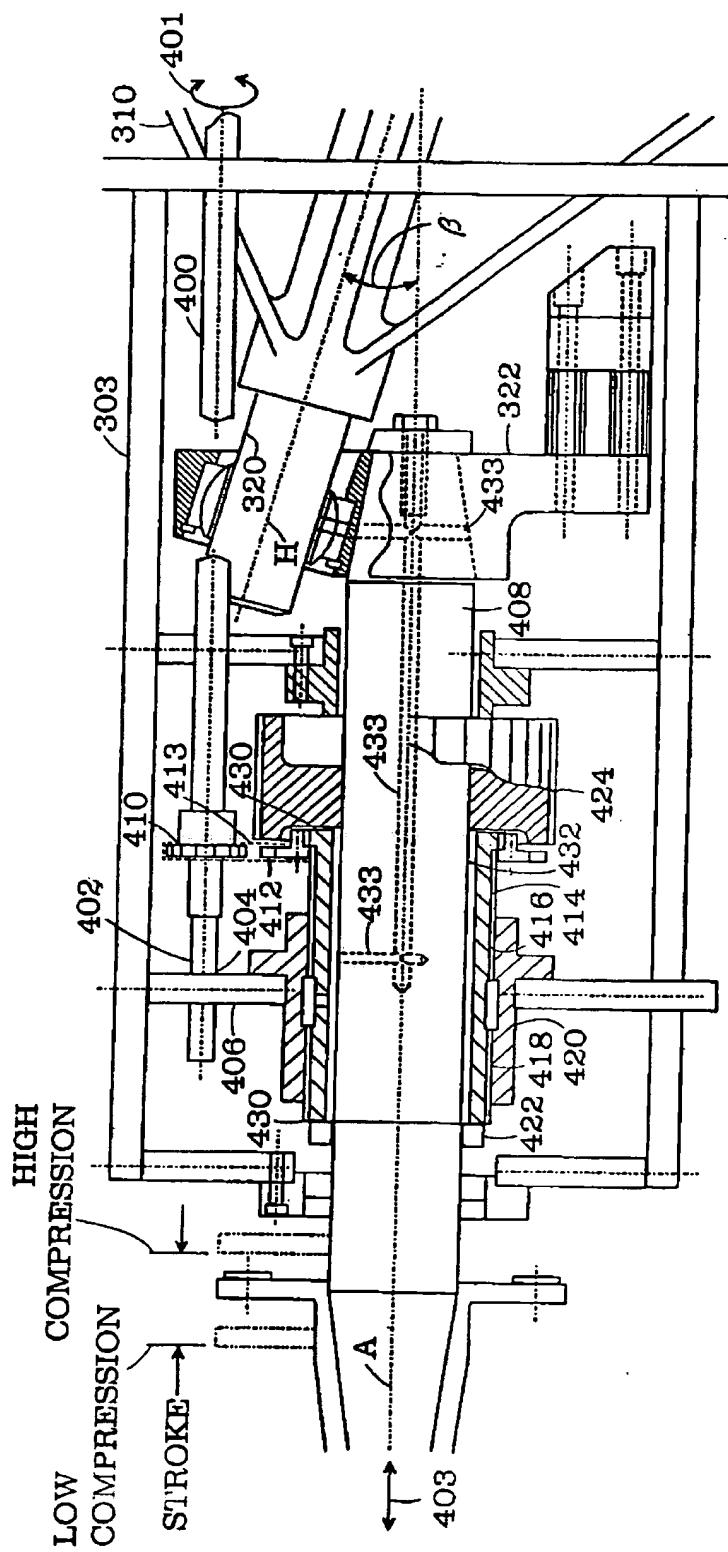
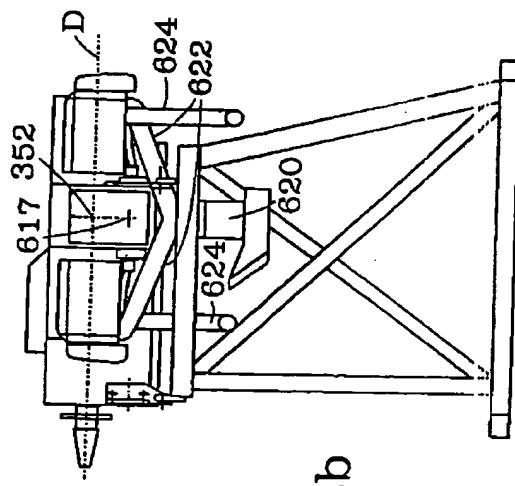
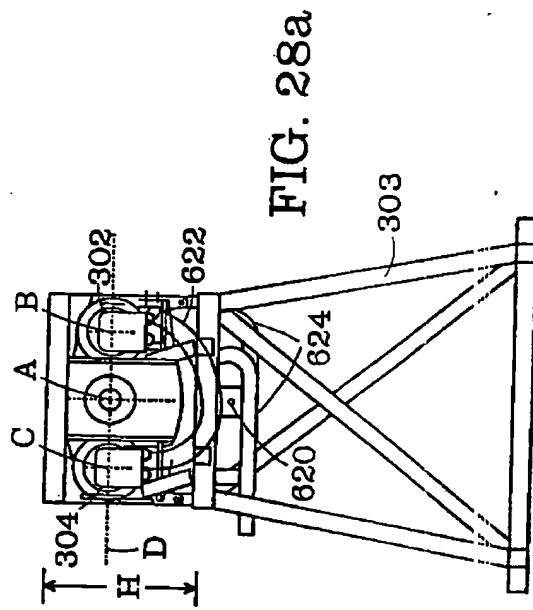
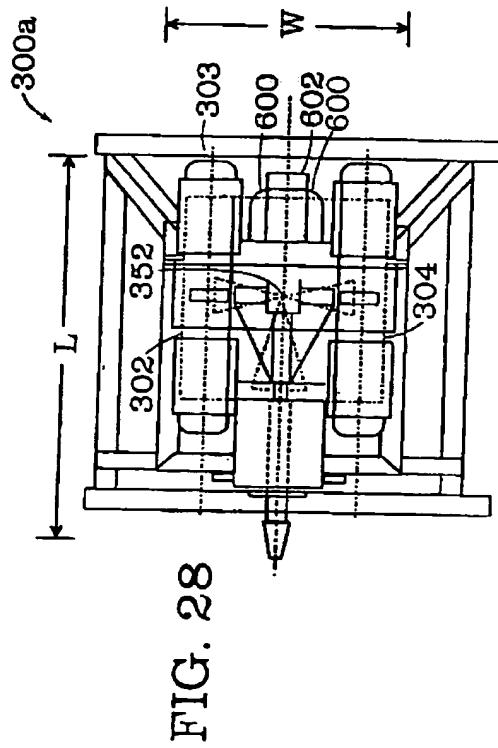


FIG. 26

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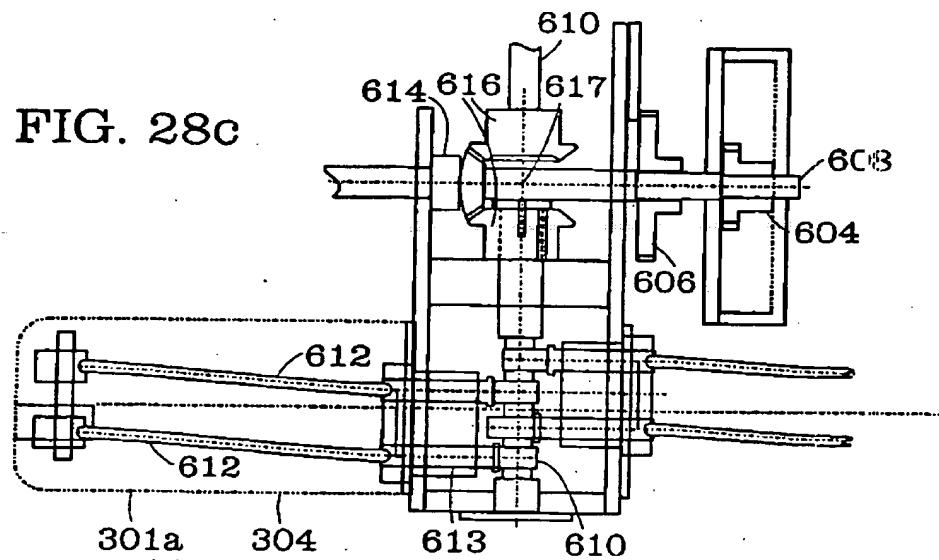
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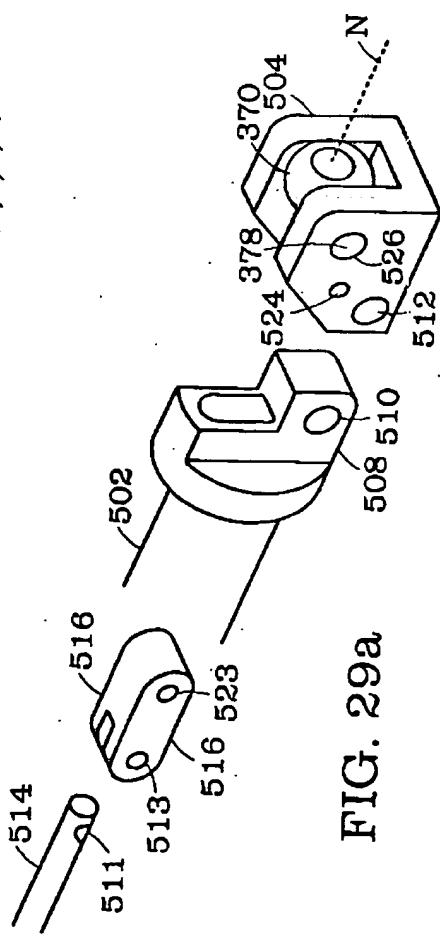
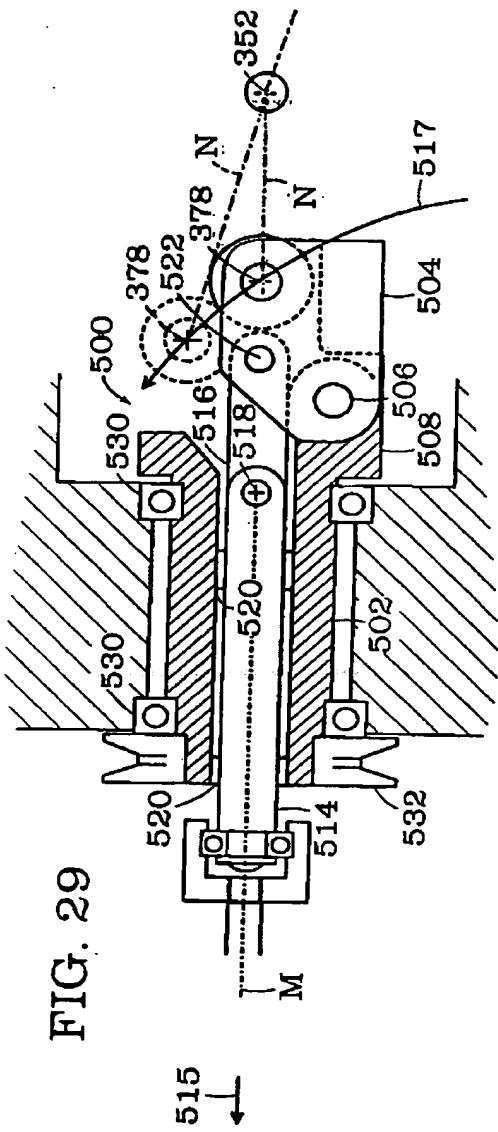
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FIG. 28c



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FIGURE EIGHT MOTION OF PISTON ARMS  
CROSS U-JOINT, WORST CASE DEVIATION

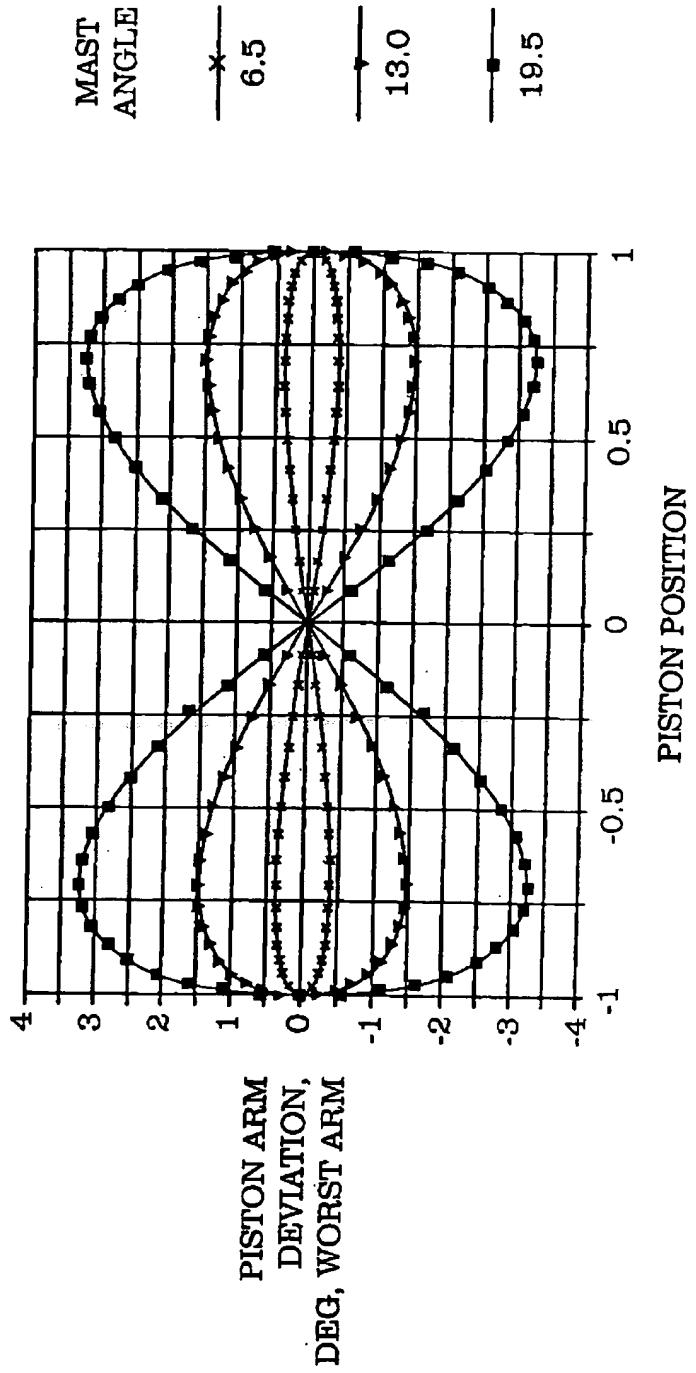


FIG. 30

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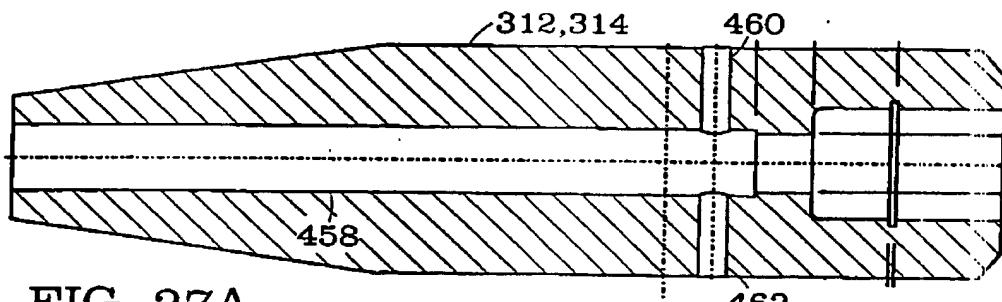


FIG. 27A

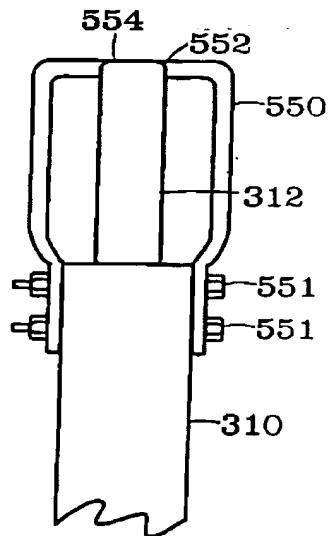


FIG. 31

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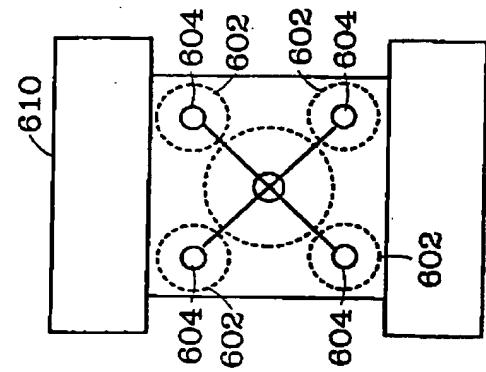


FIG. 32a

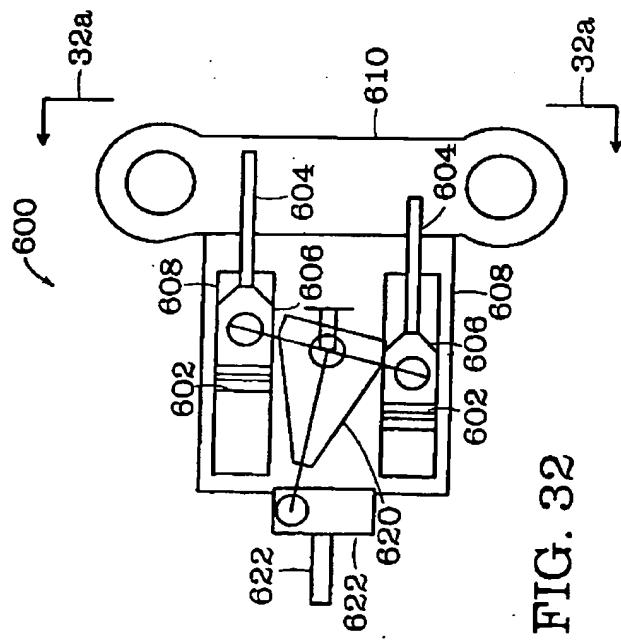


FIG. 32

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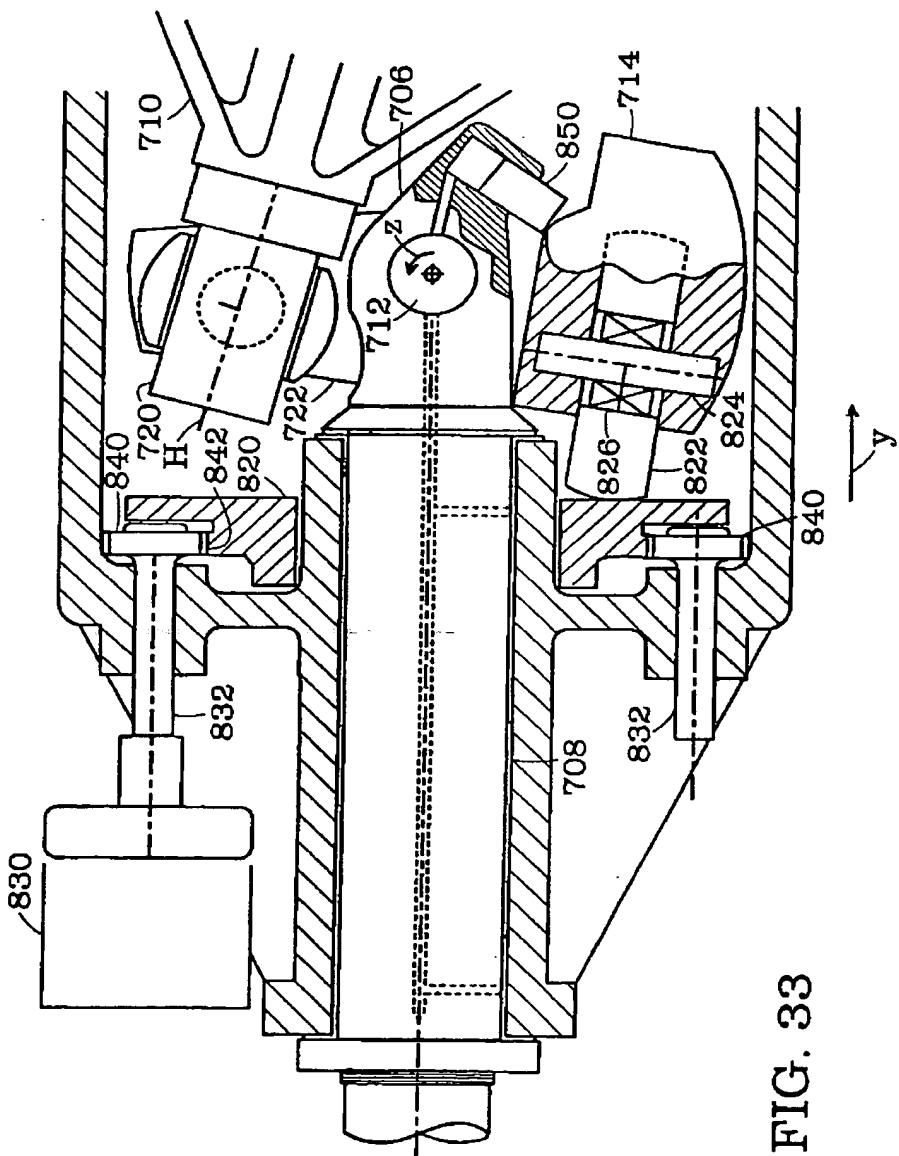


FIG. 33

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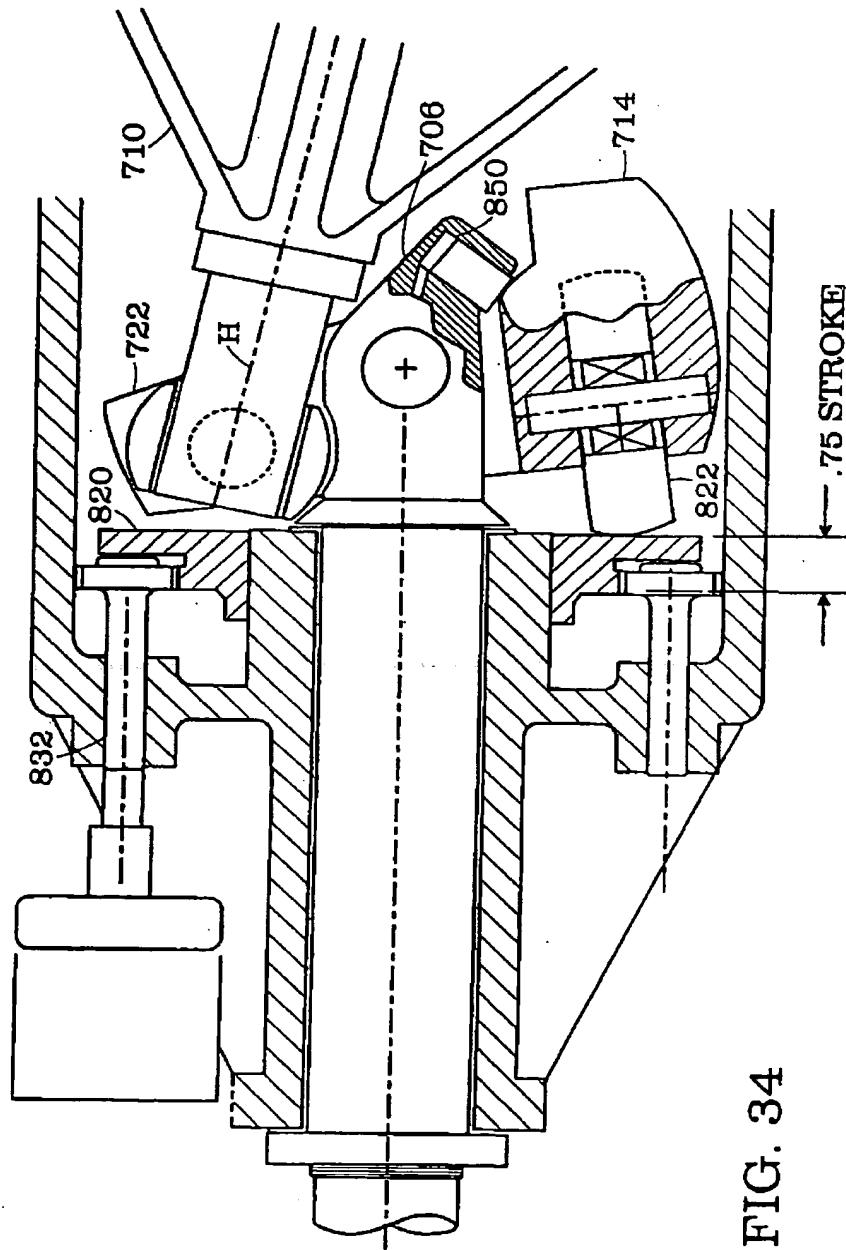


FIG. 34

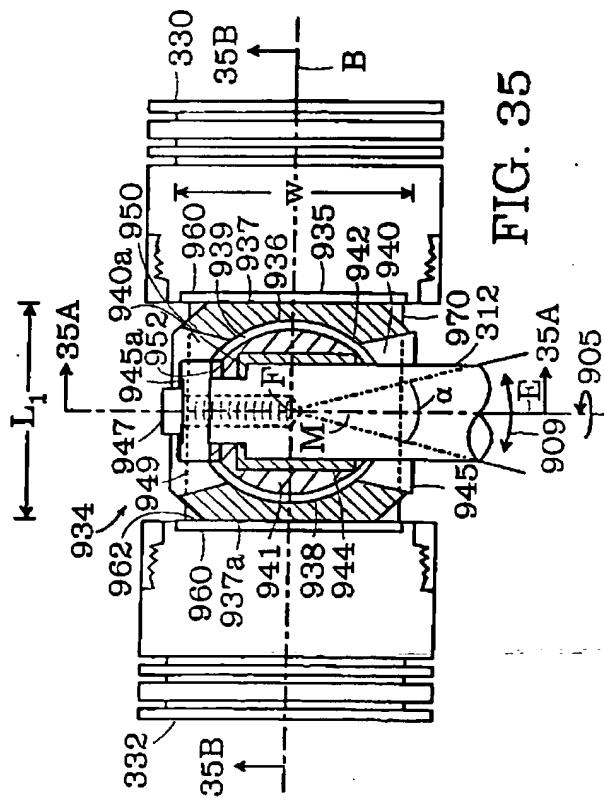


FIG. 35

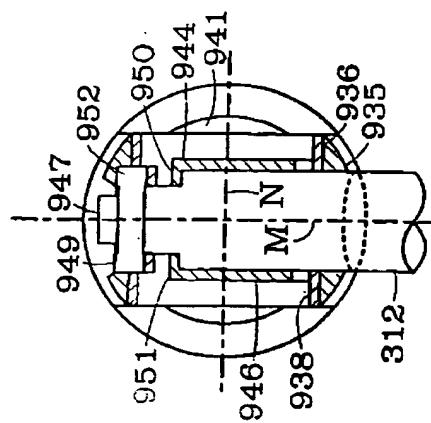


FIG. 35A

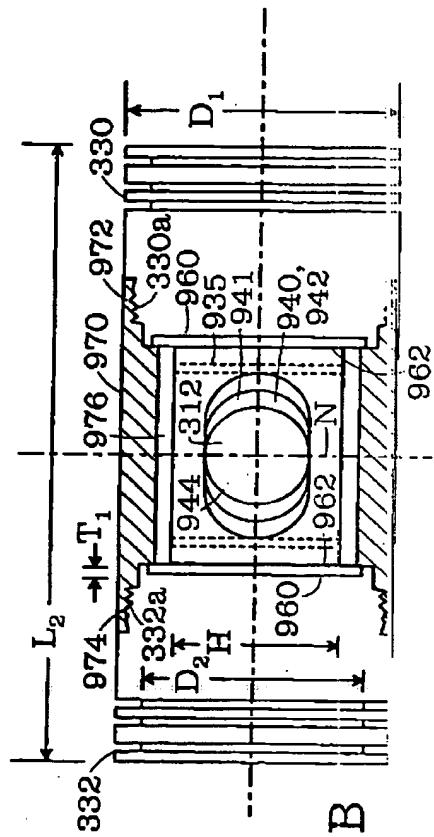


FIG. 35B

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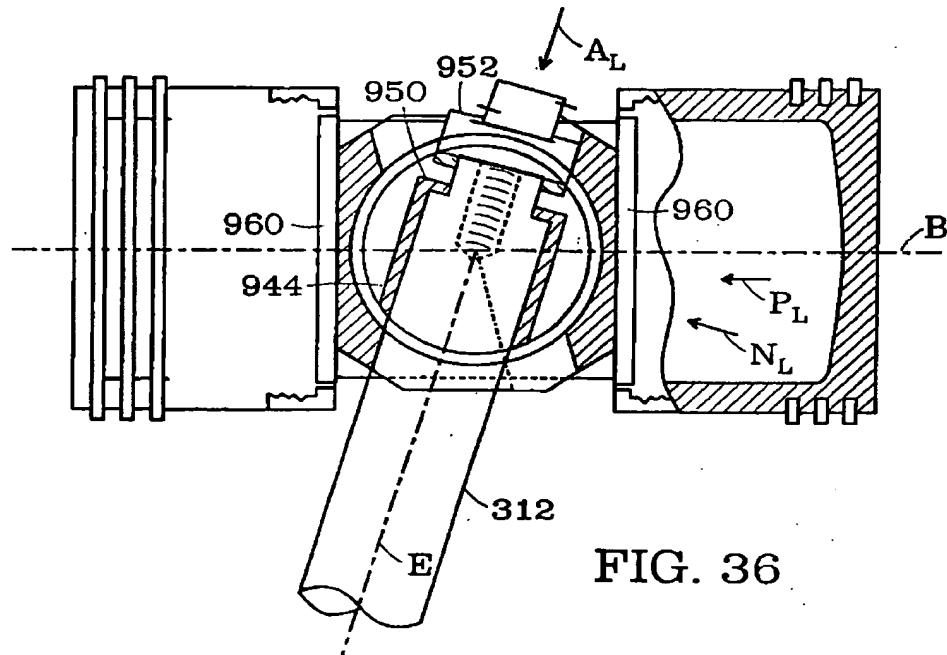


FIG. 36

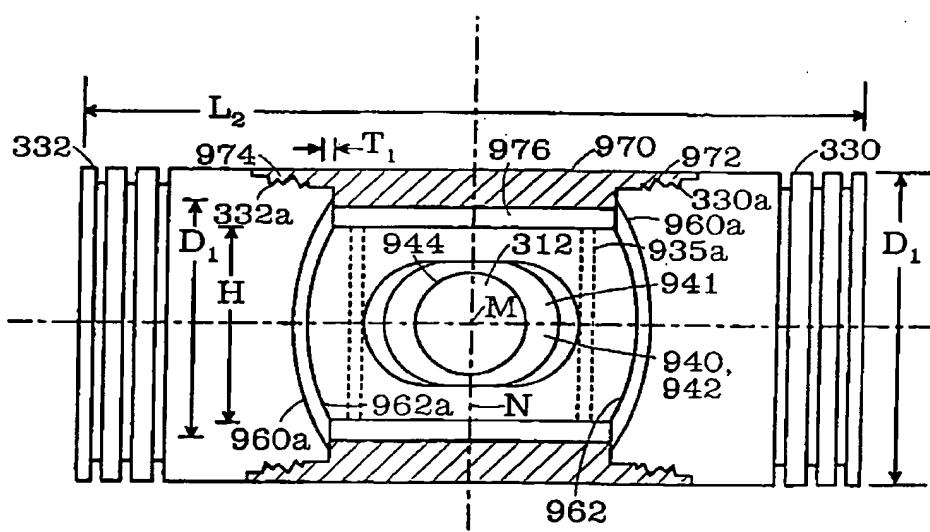


FIG. 37

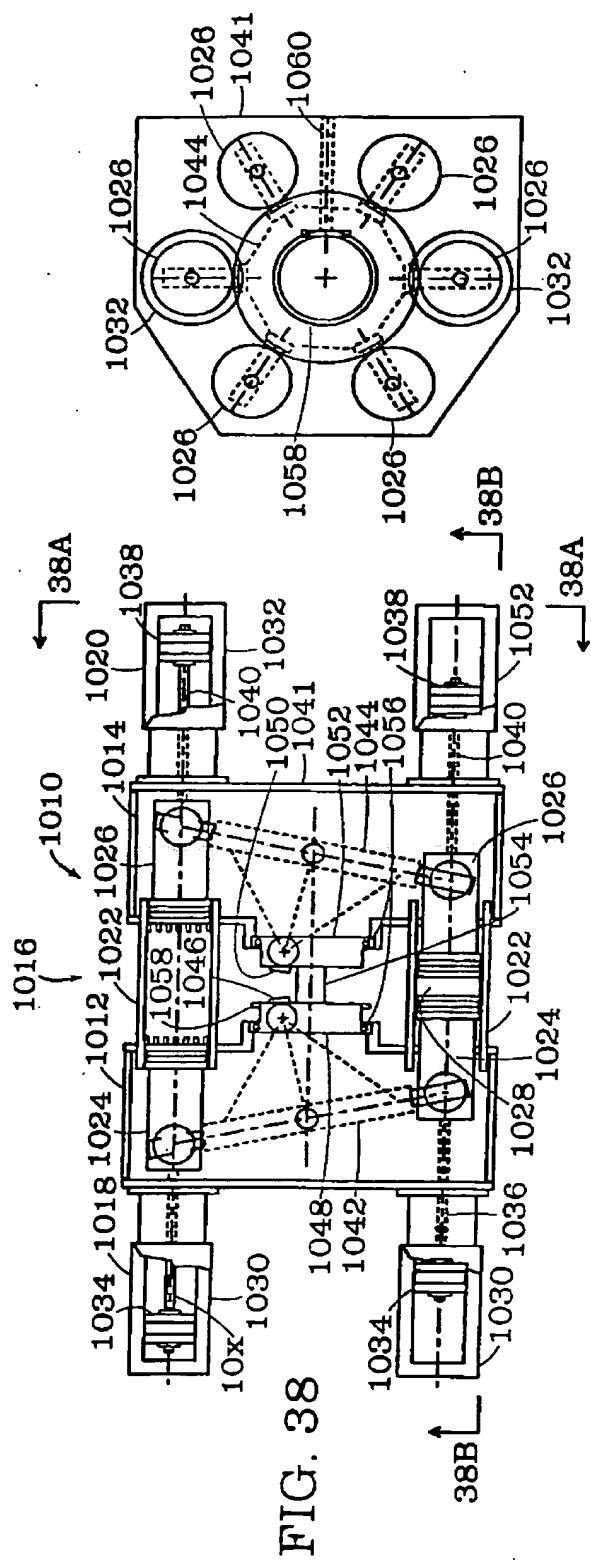


FIG. 38A

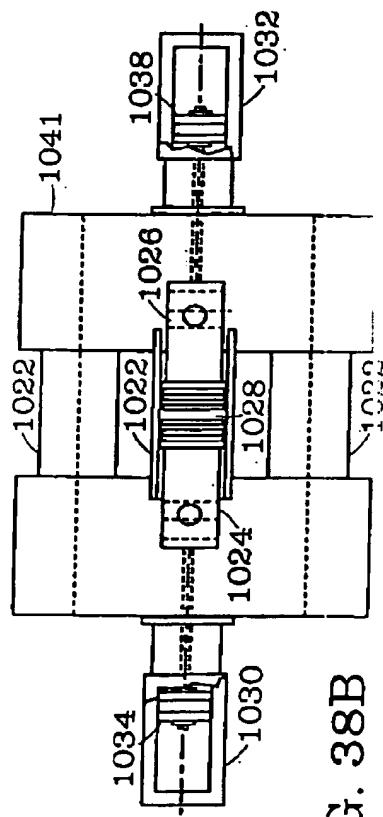


FIG. 38B